cells and progenitor cells exhibiting vasculogenesis had died. These endothelial cells were then transduced with the gene for prourokinase and seeded onto expanded polytetrafluoroethylene graft material followed by testing for adherence as described in the article. Thus, we were able to obtain sufficient cells, not only for seeding, but transduction before seeding.

Cells that were exposed to magnetic beads in the process of isolation were not suitable for cell expansion because they phagocytosed some of the magnetic beads, so proliferation was too slow. We also found that too few cells were isolated by the magnetic-bead method to make this a feasible method for seeding grafts.

Upon checking our original data, we discovered that we isolated $1.52 \pm 0.43 \times 10^6$ mononuclear cells per mL of peripheral blood, which is comparable to what Dr Tiwari and colleagues obtained. On page 185 we reported that tenfold fewer cells were isolated, a computational mistake. In a separate publication[1] we reported approximately the same values as Dr Tiwari and colleagues. In this same publication, we further describe isolation and proliferation of cells from adult peripheral blood. In addition, we have completed studies with a series of dogs having carotid artery grafts seeded with jugular vein endothelial cells on one side and peripheral blood stem cell derived endothelial cells on the other side, harvested at 1- and 6-month intervals, which show no difference in patency whether seeded with jugular vein endothelial cells or peripheral blood stem cell derived endothelial cells.[2,3]

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Regarding "Bedside vena cava filter placement guided with intravascular ultrasound"

We wish to commend the authors for their work in development of intravascular ultrasound (IVUS) guided delivery of inferior vena cava (IVC) filters at the patient's bedside (J Vasc Surg 2001;34:21-6). In the intensive care setting, a small proportion of patients cannot be transported safely to the interventional radiology suite for conventional fluoroscopically guided IVC filter placement. At our institution, this usually involves patients with closed head injuries and elevated intracranial pressure that compromises cerebral perfusion when the patient is placed supine. For the readership without access to or experience with IVUS but who have portable fluoroscopy and cooperative interventional radiologists, we would like to point out a technique for bedside placement of IVC filters developed at the University of California, San Diego.[1] Transcutaneous duplex ultrasound scanning is used to assess the internal jugular and common femoral veins bilaterally to plan venous access and the IVC to obtain diameter measurements for specific filter selection. Portable fluoroscopy with digital subtraction angiographic capability is used to perform transcatheter contrast inferior vena cavography and bilateral renal venography to confirm IVC diameter measurements and to evaluate for possible renal vein and IVC anatomic variants that would alter filter placement. Real-time fluoroscopy is used to guide device manipulation and assess adequacy of filter placement after deployment.

We do not believe that bedside IVC filter placement is appropriate in patients without strong contraindications to transport to the interventional radiology suite. The financial arguments based on differential hospital charges for bedside IVC filter placement are irrelevant given our current reimbursement environment. Tradeoffs for bedside IVC filter placement can be considerable. In the case of bedside IVC filter placement, breaches in the sterile field are more likely (eg, a guidewire touching objects outside the improvised sterile field), inventory is limited if difficulty is encountered or items are dropped, the gold standard technique of contrast venography is not used for identifying IVC and renal vein variant anatomy that may alter the placement of the filter is not used,[2] and there is no mechanism for identifying, much less correcting, maldeployed filters (eg, excessive tilt, asymmetric leg deployment, or overlapping filter struts).[3,4]

In summary, we believe that bedside IVC filter placement is a valuable alternative for these few patients with prohibitive risks for transport, but it is a suboptimal technique for most patients.

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Reply

We would like to thank Drs Rose, Kinney, and Valji for their comments, and we generally concur with their views, although some points should be clarified.

Specific indications for this technique continue to undergo refinement since this feasibility study. All patients in the research study have contraindications to transport, such as an unstable spine, continuous hemofiltration, hemodynamic instability, or hypothermia. Patients who are not in intensive care were